

(19)



JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: **09134862 A**

(43) Date of publication of application: **20 . 05 . 97**

(51) Int. Cl. **H01L 21/027**
G03F 7/11
G03F 7/40
H01L 21/3065

(21) Application number: **07291420**

(71) Applicant: **NEC CORP**

(22) Date of filing: **09 . 11 . 95**

(72) Inventor: **YOSHINO HIROSHI**

(54) FORMING METHOD OF RESIST PATTERN

(57) Abstract:

PROBLEM TO BE SOLVED: To prevent a resist pattern from deteriorating in shape without varying it in dimensions through a small number of processes when an anti-reflection film is etched by a method wherein an antireflection film is applied onto a silicon substrate and converted into silyl by heating carried out under specific conditions.

SOLUTION: An anti-reflection film 2 formed of novolak resin which contains light absorbing dye is applied onto a silicon substrate 1 and heated at a temperature of 200°C in an atmosphere of hexamethyldisilazan for five minutes to be converted to silyl. Then, resist is applied onto a silylated antireflection film 3, exposed to light through a KrF excimer laser stepper, and developed for the formation of a resist pattern 4. Then, the antireflection film 3 is etched with CF_4 gas using the resist pattern 4 as a mask. By this setup, a good resist pattern which is restrained from deteriorating in shape can be obtained.

COPYRIGHT: (C)1997,JPO

